

IN THE CLAIMS:

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~strike through~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

1-16. (canceled)

17. (currently amended) A ruled line extracting apparatus, comprising:

a straight line extracting unit extracting information of at least two~~one or more~~ straight line patterns from an input image; and

a straight line deleting unit deleting a shorter pattern of two straight line patterns which are included in the at least two~~one or more~~ straight line patterns and overlap when a ratio of a length of an overlapping portion to a length of the shorter pattern is greater than a threshold value.

18. (canceled)

19. (currently amended) A ruled line extracting apparatus, comprising:

a straight line extracting unit extracting information of at least two~~one or more~~ straight line patterns from an input image; and

a straight line deleting unit deleting a straight line pattern composed of segment patterns which are larger than a threshold value, among the at least two~~one or more~~ straight line patterns, when sizes of all of the segment patterns are greater than the threshold value.

20-29. (canceled)

30. (currently amended) A computer-readable storage medium, when used by a computer, to direct the computer to perform the functions of:

extracting information of at least two~~one or more~~ straight line patterns from an input image; and

deleting a shorter pattern of two straight line patterns which are included in the at least two~~one or more~~ straight line patterns and overlap when a ratio of a length of an overlapping portion to a length of the shorter pattern is greater than a threshold value.

31. (canceled)

32. (currently amended) A computer-readable storage medium, when used by a computer, to direct the computer to perform the functions of:

extracting information of at least two~~one or more~~ straight line patterns from an input image; and

deleting a straight line pattern composed of large segment patterns which are larger than a threshold value, among the at least two~~one or more~~ straight line patterns, when sizes of all of the segment patterns are greater than the threshold value.

33-40. (canceled)

41. (currently amended) A ruled line extracting method, comprising the steps of:

extracting information of at least two~~one or more~~ straight line patterns from an input image;

deleting a shorter pattern of two straight line patterns which are included in the at least two~~one or more~~ straight line patterns and overlap when a ratio of a length of an overlapping portion to a length of the shorter pattern is greater than a threshold value.

42. (canceled)

43. (currently amended) A ruled line extracting method, comprising the steps of:

extracting information of at least two~~one or more~~ straight line patterns from an input image; and

deleting a straight line pattern composed of segment patterns which are larger than a threshold value, among the at least two~~one or more~~ straight line patterns, when sizes of all of the segment patterns are greater than the threshold value.

44. (canceled)